

SUMMARY OF THE FINAL REPORT

Night trains to the European continent

12 May 2020



Conclusions of the Inquiry

The procurement of night train services to the European continent requires a number of conditions to be met. This concerns, among other things, legal, technical and capacity aspects.

The Swedish Transport Administration's conclusion based on the situation at the time of submission of this final report is that there are currently no opportunities to procure services which extend to/through Germany. The German Ministry of Transport has stated that they do not intend to impose public service obligations on long-distance rail transport, i.e. they will not reach an agreement with Sweden for night train services in Germany to be covered by a public service obligation. Further negotiations at intergovernmental level are needed in order to make progress on this issue. In the absence of such an agreement, the Swedish Transport Administration's assessment is that the desired night train service procurement cannot currently be formulated so that it is consistent with the purpose and wording of the EU's provisions.

However, the Swedish Transport Administration considers that it may be possible to apply a solution whereby a public service obligation is only approved in Sweden and Denmark and that the service thereafter becomes commercial. However, such a solution would need to be investigated. The European Commission's Legal Service has been asked whether a public service obligation could apply on certain sections of a route only, while other sections are commercial and not subject to a public service obligation. No statement had been received by the time of submission of this final report.

Provided that the necessary agreements with the countries concerned can be concluded, the Swedish Transport Administration sees it as an appropriate initial step in procuring train services to Germany and Belgium, via Denmark. The Inquiry has proposed two options in the short term. The principal possibility being put forward is a train service from Malmö to central Germany, ideally Cologne and on to Brussels in Belgium. Cologne is an important hub in Germany and both Cologne and Brussels open up the possibility of fast daytime connections to the western parts of the European continent, including Paris.

Another possibility in the short term is a night train service all the way from Stockholm to northern Germany, ideally Hamburg. There is some uncertainty concerning the impact on competition regarding the Stockholm-Hamburg route, as the Snälltåget service operates on the Malmö-Berlin route. However, the Swedish Transport Administration considers that competition with the service that the Snälltåget has provided to date would be limited because the service does not serve the same route or have the same starting point or final destination, and it is anticipated that the procured night train service would run throughout the year, whilst the Snälltåget service only operates during the high season, primarily during the summer. However, Snälltåget's plans to run night train services from Stockholm-Malmö-Copenhagen-Hamburg-Berlin from 2021 will increase the level of competition. The Swedish Transport Administration also considers it appropriate to commence procurement on a smaller scale, as services procured under the EU Public Passenger Transport Regulation should be "necessary and proportionate", and therefore proposes the Malmö-Cologne-Brussels route as an initial step.

It would be desirable to have a night train connection which operates all the way from Stockholm-Brussels, but the Swedish Transport Administration believes that it may be difficult to achieve reasonable departure and arrival times for this service in Stockholm and Cologne. In addition, the total journey time will be long, 17 hours in the best case scenario before the Fehmarn Belt Fixed Link opens, reducing journey times by approximately two hours.

Where procurement is possible, the Inquiry sees two possible ways of procuring the service: a direct award or a competitive tendering procedure, both under the EU Public Passenger

Transport Regulation. A directly awarded procurement would probably be slightly faster. However, a direct award would be an exception from the general rule of using competitive tendering procedures and would therefore have to be applied restrictively. The suitability of a direct award must also be weighed against how the public service obligation is defined and what its geography will look like. During discussions with the European Commission directorate DG Move, the directorate stated that, in the case of a solution where a public service obligation cannot be implemented for an entire route, a competitive tendering procedure would be preferable. A direct award would also place great demands on controls to ensure that the operator is not being overcompensated for providing the service. A competitive tendering procedure does not impose the same requirements regarding controls on overcompensation, but would probably take slightly longer.

With a direct award, commencement of the service during 2022 should be possible, but this assumes that the legal process described in section 9.4.2 proceeds according to the theory and that rolling stock is available. It may be possible to find used vehicles which the Swedish Transport Administration could lease or purchase and then provide for the service, but the Swedish Transport Administration believes that the easiest way would be to procure an operator which provides the rolling stock themselves.

Competitive procurement would probably take about a year longer than a direct award and, with such a procedure, the service could commence in 2023, provided that the process proceeds without any appeals and that rolling stock is available, etc.

Irrespective of whether competitive procurement or a direct award is adopted, the Swedish Transport Administration considers four years to be an appropriate period of time for an initial contract to establish and evaluate the night train service, with an option to extend the contract by up to two years, if the service is to continue after the end of the trial period.

The technical conditions and requirements in different countries complicate and increase the cost of a night train service, but these issues can be resolved. Other challenges include capacity shortages and the uncertain availability of rolling stock.

Capacity at the intended destinations, Hamburg, Cologne and Brussels, is highly utilized, particularly in the mornings and late afternoon/early evening. By being flexible with timetables and accepting that the service will call at smaller stations outside the major cities, the Inquiry believes that satisfactory train paths and thus timetables can be achieved.

Rolling stock that meets the technical requirements and is in reasonable condition to operate the service is considered to be in short supply at the present time. Some coaches may be available, but sleeping cars which do not require refurbishment are in short supply. It is also uncertain how long refurbishment would take if it were needed. It would of course be possible to order new rolling stock, but such a solution would take time.

The current market for night trains

Unlike air travel, the deregulation of the railway market has involved more problems concerning international travel. There are no international standards for trains; instead, requirements vary between countries, meaning that it is often necessary to change locomotives and staff when crossing national borders. This has a negative impact in terms of both pricing and travel times. It is difficult to make night train services profitable when they are competing on routes with low cost airlines, and when flying is the faster option.

The market share for train traffic to the European continent is currently approximately 1 percent. Travel to Germany and further afield is dominated by air traffic. The longer the journey, the larger the market share for air traffic.

Most of the train services to other countries are daytime train services. There is just one night train service in a southerly direction – Snälltåget's Malmö-Berlin service, which runs via the Trelleborg-Sassnitz ferry. However, Stena Line has announced that this ferry service is to be withdrawn, and Snälltåget has applied for permission to operate the night train service via Denmark from 2021. This night train service only runs during part of the year, primarily during the summer months.

There are currently many more night train services in eastern Europe compared with the western parts of the continent. Austrian railway undertaking, ÖBB, is the dominant operator, having taken over the trains from the German railway undertaking, DB, and continuing some of these routes. ÖBB has a relatively extensive network. Otherwise, most of the routes are national ones, or between neighbouring countries.

On the Swedish market, there is – apart from Snälltåget – also SJ AB, which operates the night train services that the Swedish Transport Administration has procured to Upper Norrland, Narvik and Jämtland. Night train services to Upper Norrland will be taken over by Vy from December 2020. SJ also operates night train services on a commercial basis between Stockholm and Malmö. In addition, there are several other operators on the Swedish passenger traffic market that may be interested in operating night train services.

The Swedish Transport Administration has commissioned a survey of the level of interest in travelling on a potential night train service to Europe. The results of this survey show that there is a clear interest amongst the general public in the night train concept. Of those questioned, 21 per cent stated that they find the concept very attractive, and 41 per cent stated that they find the concept quite attractive.

Legal conditions for supporting night train traffic according to the remit

Interregional and international passenger services by rail should, as a rule, be operated commercially. The EU Public Passenger Transport Regulation regulates how competent authorities can nonetheless intervene to ensure that passenger services are provided that are more frequent, safer, of higher quality and cheaper than the free market can provide. A public authority can then enter into agreements and pay compensation for public transport that falls under the 'public service obligation'.

Public service contracts can be allocated through two different procedures – following a competitive/open tendering procedure or through direct award. The tendering procedure or direct award must be published in the Official Journal of the European Union at least one year before the tendering procedure begins or the direct award takes place.

The Inquiry has also studied other ways of supporting services according to the remit – through various regulatory frameworks on state aid and through owner directives to SJ. In addition, Snälltåget has put forward its views on how the State can best support the establishment of train services. It is a matter of creating the conditions for and supporting operations that reduce/eliminate the technical and practical challenges rather than procuring services.

Technical challenges for international train traffic

Many differences relating to technical conditions in the countries concerned must be addressed if it is going to be possible to operate night train services between Sweden and the European continent. There are several different systems, meaning that dual-voltage locomotives are needed for travel via Denmark and if the train is continuing to Belgium or France, for example. Loading gauges are smaller on the European continent than in Sweden, which means that Swedish rolling stock cannot be used. In addition, the trains must be equipped with each country's signalling system, and there are also fire safety requirements for long tunnel sections. The onboard staff must be able to speak the language of the country concerned.

Capacity and train paths

A train path is required in order to drive a train through a country. Within Rail Net Europe (RNE), there is an agreed process for the allocation of international train paths. This works in essentially the same way in all the countries concerned. Applications for capacity for the next timetable period must be submitted by April.

The Inquiry notes that it is the relevant operator that must apply for capacity. As infrastructure manager, the Swedish Transport Administration itself cannot do this ahead of a possible procurement. It is possible for one or more operators to apply for train paths even if no agreements have yet been concluded, although this is not optimal from a train planning perspective.

The railways are congested, especially around major cities and large rail yards in Germany. At peak times in the morning and late afternoon, it can be difficult to find train paths. This can limit the possibilities of establishing a good timetable for night train services. Capacity is also limited by extensive investment and maintenance measures for infrastructure over the next 10 years in Sweden, Denmark and Germany.

Another factor limiting the possibilities for night train services is access to rolling stock. As outlined above, Swedish rolling stock cannot be used on the European continent, and access to rolling stock on the second-hand market is uncertain. It takes time to procure and manufacture new rolling stock. Ordering new rolling stock also entails a very long-term financial commitment, with a depreciation period of 25–30 years.

Possible destinations

There are two ways of reaching the European continent by train – via ferry to Germany, as currently used by Snälltåget, or via the mainland route through Denmark. The Inquiry sees advantages with the ferry link, especially in the short term, but has reached the conclusion that the shorter travel time via Denmark is preferable. Stena Lines' announced withdrawal of the Trelleborg – Sassnitz service further underpins this view.

A reasonable journey time by night train is considered to be a maximum of 12 hours for business travellers, whereas leisure travellers would probably accept up to 17 hours. From Stockholm, it is only possible to reach northern German cities within 12 hours, whereas a night train service from Malmö could reach considerably further.

In the short term, the Inquiry recommends two potential routes: Malmö-Cologne and Stockholm-Hamburg. However, the Inquiry initially recommends Malmö-Cologne. Regarding Stockholm-Hamburg, there is some doubt as to the effect on competition for the existing

commercial train service that partly operates on this route. In addition, the Inquiry considers that it would be appropriate to commence procurement on a smaller scale, as procured services should be “necessary” and “proportionate” under the EU Public Passenger Transport Regulation.

It would be desirable to have a night train connection which operates all the way from Stockholm-Brussels, but the Swedish Transport Administration believes that it may be difficult to achieve reasonable departure and arrival times for this service in Stockholm and Cologne. In addition, the total journey time will be long, 17 hours in the best case scenario before the Fehmarn Belt Fixed Link opens, reducing journey times by approximately two hours.

Costs

Night trains that operate on a daily basis throughout the year are not considered to be profitable, as demand varies considerably between different times of the year and different days of the week. It is generally difficult to make night train services profitable, as they entail high capital and maintenance costs and have few places per carriage. Moreover, seats in sleeping cars can only be sold once per journey.

A cost estimate has been prepared for the two possible service scenarios. The first of these is Malmö-Cologne-Brussels. This would involve losses of approximately SEK 60 million per year for the route to Cologne, and SEK 50 million per year for the extension to Brussels. Extending the route to Brussels is estimated to yield slightly better results, but this would involve practical difficulties. The reasons why Brussels would yield higher revenue are that Brussels is a destination in itself, including for business travellers, and that it facilitates changing trains to major destinations, such as Paris and London. This scenario may also facilitate a timetable with attractive travel times for the Danish market, which is considered to offer greater prospects for sharing the deficit with Denmark. A service along the entire Stockholm–Brussels route would be expected to generate a loss of approximately SEK 55 million, insignificantly more than Malmö–Brussels, but such a service would also generate the most passengers, the highest rate of recovery of costs and the lowest cost per passenger-kilometre. However, the Swedish Transport Administration believes that the service would be difficult to implement in the short term.

The second scenario is a night train service from Stockholm to Hamburg which could be extended to Berlin, with a portion from Oslo and Gothenburg which could then be coupled to the train in Malmö. Stockholm-Hamburg would generate better results, with losses of approximately SEK 45 million per year. An additional branch from Oslo and Gothenburg would incur extra costs of almost SEK 50 million and result in a total loss of approximately SEK 90 million per year.

The cost estimate is based on a number of assumptions. A sensitivity analysis shows that the occupancy rate has the greatest impact on the outcome, with a change in occupancy rate of 10 percentage points impacting on earnings by SEK 25 million. Changes in price, number of seats per coach and operating costs would have less impact.

Another way of reducing the cost would be to vary the supply. However, this change would have relatively little impact on costs, but a significant impact on travel.

The use of second-hand rolling stock would reduce capital costs, but result in higher maintenance costs and reduced revenues due to greater reluctance to travel on old coaches. The improvement in earnings would be just SEK 7 million.

It is difficult to make night train services profitable under the currently prevailing circumstances. New trains with more seats per coach or combined day and night trains could generate greater profitability, but would take time to develop. Other changes in society such as higher air fares,

greater willingness to pay for night trains and an integrated information and ticketing system covering the countries concerned could also improve profitability.

Application of the EU Public Passenger Transport Regulation

The procurement of a night train service to Europe under the EU Public Passenger Transport Regulation would have to be justified. The justification may be that the market is not providing a range of services offering climate-friendly and time-efficient travel at night. The suggested night train route would improve opportunities to reach western Europe by train. Night trains to the continent would facilitate better connections to the rest of Europe's interconnected transport systems. The Swedish railway network would thus be integrated with the rest of the European railway network through night train services. There is currently a lack of train connections which do not require several time-consuming changes. Moreover, night trains to the continent would improve the opportunities for Swedish and Danish passengers in particular to reach destinations in Europe in a climate-friendly, comfortable and safe manner. The couchette and sleeper carriages in a night train can also provide better quality and time efficiency for travellers, with the opportunity for comfortable sleep during the journey.

DG Move has been asked whether the Commission considers that procured night train services, justified by the above need for daily, time-efficient and climate-friendly transport service, would be compatible with the EU Public Passenger Transport Regulation.

Depending on how the EU Public Passenger Transport Regulation is applied in the various countries concerned, different ways of dealing with the public service obligation can be outlined. The Inquiry has considered three options. Possible solutions are that the competent authority of each Member State:

1. introduces a public service obligation for the Member State's section of the route;
2. accepts that the Swedish Transport Administration is introducing a public service obligation by entering into a public service contract for the entire route; or
3. that the service in a particular country or countries is operated on a commercial basis while it is subject to a public service obligation in others.

Discussions with DG Move indicate that option 1 would be feasible. However, Germany and Belgium do not appear to want to be part of such a solution.

As regards option 2, it should not be a barrier if a national competent authority has no objection to Sweden entering into an agreement concerning a public service which extends into the country concerned. DG Move and Germany have declared a different view and the Member States concerned obviously have the final word on this issue.

At an early stage in the Inquiry, DG Move was also asked whether it would be compatible with the Regulation if services which are subsidised in Sweden (and Denmark) were to continue into Germany, without a decision being made or a public service obligation being introduced there (option 3). DG Move has forwarded the matter to the Commission's Legal Service, but no response has yet been received from them.

The Danish ministry has consistently had a positive view as regards cooperation over a public service obligation for night train services, but this will of course depend on the intended arrangements and no deeper and more detailed discussions concerning route, financing, procurement, etc. have yet taken place with the Danes.

In Germany, the situation is different. As far as the Swedish Transport Administration is aware, Germany does not only lack a national equivalent to the Swedish Transport Administration's scope to reach agreement concerning interregional public rail services. According to the German ministry, all long-distance traffic must be operated on commercial terms, without any subsidies.

In Belgium, the Ministry of Transport is authorised to enter into agreements concerning cross-border services under the EU Public Passenger Transport Regulation. During a meeting with the Belgian ministry, it became clear that it has no objection to a service which is subsidised in Sweden and Denmark then operating on a commercial basis through Germany and on to Brussels. On the other hand, there is considerable doubt over the option of the Swedish Transport Administration entering into a public service contract which would extend all the way to Brussels. There is no actual ban on such an arrangement in Belgium, but it is not compatible with current Belgian policy.

If the legal issues regarding a potential procurement can be resolved, the Swedish Transport Administration believes that the service could commence in 2022/2023 at the earliest. See the table below. The times given in the table below are hypothetical and apply in the event of a thoroughly frictionless procurement procedure where there are no appeals, agreements with other countries are in place, and there are operators that have available rolling stock.

The Swedish Transport Administration's view is that in the event of an assignment to procure traffic, agreements with the countries concerned should be completed before information about the procurement is published in the Official Journal of the European Union.

Summary of the hypothetical timings for the commencement of night train services based on the different procedures.

Uppdrag att upphandla	Trafikstart vid konkurrens- utsatt anbudsförfarande	Trafikstart vid direkttilldelning
Maj 2020	januari 2023	maj 2022
December 2020	augusti 2023	december 2022

Procurement strategies

To enable the rapid commencement of the service with limited costs, the service must be operated using existing coaches. The State could procure an operator with its own coaches or lease or procure existing coaches and procure an operator. During the first four-year contract period, an evaluation should be carried out to provide a basis for a decision concerning possible continuation.

If the services achieves the established targets and is not deemed to be commercially viable, continued procurement may be justified. The State could then either procure new coaches and procure an operator, or procure an operator with its own coaches. It is not believed that procuring an operator which is responsible for procuring coaches would offer any benefits for Swedish conditions.

A service in step 2 using new coaches provided by the state could commence in 2029. Procuring an operator with its own coaches would be expected to be somewhat faster, with the service in step 2 possibly commencing in 2028.

Contribution to meeting transport policy objectives

Night train services to the European continent would make a positive contribution to achieving the transport policy objectives.

The magnitude of this impact would depend on the scope of the services provided. An initial step, with one train in each direction per day, would provide a limited addition to travel opportunities and thus also have a limited impact on the transport policy objectives. The magnitude of the impact would also depend on whether the train journey replaces other modes of transport and, if so, which ones. Potential effects over and above improved accessibility would be environmental benefits (reduced emissions, improved energy efficiency) and increased safety. If rail travel replaces travel by air and car, substantial climate benefits could be achieved. Most of the estimated train journeys are journeys which would previously have been made by air or car, meaning that the climate impact would have a socio-economic value which is significantly greater than the estimated net cost of the service.